

# Reclamation Manual

## Directives and Standards

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**Subject:** Directives for the Review of Operation and Maintenance (RO&M) Program Examination of Associated Facilities (Facilities Other Than High- and Significant-Hazard Dams)

**Purpose:** Reclamation has a responsibility to ensure that its water-related facilities (Federally funded facilities and those included as part of an authorized Reclamation project) are effectively operated and maintained. Whether or not operation and maintenance have been transferred to a water user organization, Federal investment and ownership in these facilities has an inherent liability (design/construction) and there is a need to safeguard related public interests relative to their operation. To adequately protect these interests, a periodic review of the operation and maintenance activities at each facility must be made. This objective has been successfully met (and will continue to be met) through the RO&M Program and the accompanying periodic field examinations.

**Authority:** Reclamation Project Act of 1902 and Supplementary Acts.

**Contact:** Water Resources Office, D-5500

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1. **Definitions.** In lieu of the historic division of Reclamation facilities under the RO&M Program of "major" and "minor" facilities, features will be separated into two groups:
  - A. **High- and Significant-Hazard Dams.** All dams presently classified as such under Reclamation's Safety Evaluation of Existing Dams (SEED) Program, where partial or complete failure of the dam results in the release of floodwaters which have the potential to cause loss of life or significant property, natural resource, or cultural resource damage downstream from the dam. For these dams, a single formal examination will be conducted, meeting the objectives of both the RO&M and the SEED Programs. The directives and procedures governing these examinations (facility reviews) will be provided separately.
  - B. **Associated Facilities.** All remaining Reclamation facilities other than high- and significant-hazard dams, as outlined in these directives. The name "associated" is not to infer association with the dams within the first group in all cases. Each region has the option of dividing this group of facilities to allow for clarification of office roles and responsibilities.
2. **Program Implementation.**
  - A. **Listing of Facilities.** Each area office will maintain a comprehensive inventory or listing to confirm that all Reclamation facilities (either by ownership or included as part

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of an authorized Reclamation project) are examined regularly under the RO&M Program. These facilities should include:

- (1) Carriage, distribution, and drainage (CD&D) systems.
- (2) Pumping plants<sup>1</sup>.
- (3) Powerplant structures<sup>1</sup>.
- (4) Tunnels/pipelines.
- (5) Diversion and storage dams (low hazard)<sup>2</sup>.
- (6) Bridges.
- (7) Regulating reservoirs (low hazard)<sup>2</sup>.
- (8) Fish passage and protective facilities, including hatcheries.
- (9) River channelization features.
- (10) Rural/municipal water systems.
- (11) Desalting and other water treatment plants.
- (12) Maintenance buildings and service yards.
- (13) Facilities constructed under past loan programs.

**B. Funding/Cost Recovery.** The costs of conducting RO&M examinations on associated facilities operated and maintained by Reclamation, either by its own personnel or by contract (where the O&M is funded by appropriations or basin funding), will be recovered in the same manner as other project O&M costs. Additionally, RO&M examination costs will be recovered on those associated facilities transferred to water user organizations for O&M responsibility in all cases where the contract with the organization does not specifically prohibit such recovery (that is, where the contract is “silent” on the cost recovery issue).

- (1) **Non-Reimbursable.** However, in either case, if the RO&M examination includes review activities which are beyond and separate from the scope of project O&M activities and have been defined as being nonreimbursable by law or Department of the Interior/Reclamation policy, the related costs will be excluded from these prescribed cost recovery procedures and associated cost allocations.
- (2) **Costs.** The costs associated with the examinations will include all actual and administrative costs related to preparing for the examination, conducting the

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<sup>1</sup>Applicable mechanical, electrical, and operational issues for powerplants and large pumping plants (generally those rated above 2,500 horsepower) will continue to be provided under the Review of Power O&M Program.

<sup>2</sup>Examinations of low-hazard dams will include a review of any changed downstream site conditions which could possibly affect the dam's hazard classification. As appropriate, the following type of statement should be included in the report: There have been no significant changes to affect the low-hazard classification. The Dam Safety Office will be notified of any appreciable observations downstream of these dams that could result in the need for a reassessment of the hazard classification (to a high or significant hazard classification).

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examination, and preparing/producing/distributing the associated report. The costs of the RO&M examinations will include only those persons of the area office, regional office, and Technical Service Center (TSC) (as applicable) that are essential for the examination. Such costs will not include any expenses associated with the training of Reclamation staff in conducting examinations.

- (3) **Examinations.** For the purposes of administering cost recovery procedures, the term examination will mean the periodic field review conducted by Reclamation under the RO&M Program, and the term inspection is considered to mean any other site visit to evaluate a particular concern(s) or problem(s) and provide assistance relative to any corrective action (in particular, when requested by the water user organization or performed as a follow-up to an RO&M examination).
- (4) **Inspections.** When an inspection of a specific structure or facility is conducted, the inspection will be made by representatives of the regional and/or area office(s) and, if requested, by appropriate technical personnel from the TSC. This inspection will be conducted under the terms of the water service or repayment contract with the water user entity, and the costs thereof will be reimbursable, in accordance with the existing allocation of O&M costs, unless prohibited by contract.

### 3. Examination Purposes and Content.

#### A. **Purposes.** RO&M examinations will be conducted to:

- (1) Ensure facilities continue to provide authorized project benefits.
- (2) Ensure facilities are operated effectively.
- (3) Protect public interests, safety, and the environment.
- (4) Minimize liability to the Federal Government.
- (5) Improve water management/conservation.
- (6) Monitor effectiveness of other program issues related to O&M of the facilities.
- (7) Promote technical exchange of information.
- (8) Maintain familiarity with facilities/training of staff.
- (9) Verify compliance with contract provisions.

#### B. **Content.** As illustrated by the following list, the examination is expected to be representative of both the traditional O&M activities and more contemporary (environmental and public interests) types of issues. Examination content will encompass the following issues, as applicable:

- (1) Condition of the facilities.

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- (2) Emergency and replacement reserve fund status.
- (3) Water operations.
- (4) Water management and conservation.
- (5) Operating personnel safety requirements and procedures.
- (6) Hazardous materials management.
- (7) Operational problems (e.g., urbanization, crossings, right-of-way encroachment).
- (8) Maintenance management/practices.
- (9) Operating procedures/documentation.
- (10) Operator training (adequacy/needs).
- (11) Emergency preparedness/management.
- (12) Handicapped access.
- (13) Public safety and site security.
- (14) Pest management.
- (15) Status of Government-furnished equipment.
- (16) Endangered species.
- (17) Habitat/wetlands.
- (18) Environmental impacts.
- (19) Compliance with mitigation.

C. **Coordination With Other Programs.** To avoid unnecessary duplication of review activities of some of the above issues by other existing programs, coordination will be made as necessary between the RO&M Program and other pertinent programs.

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- D. **Emphasis.** In order to provide a proper blend of O&M aspects during these examinations, an increased emphasis should be placed on the "operations" aspects, especially how the operations involve public interests. Other issues, such as hazardous materials management, pest management, public safety, etc., will be addressed to the extent determined by the examination team's experience and knowledge of those issues. When known and deemed appropriate, specialized expertise will be requested and utilized as part of the examination process.

#### 4. Examination Procedures.

- A. **Conducting Office.** Examinations will be conducted by at least one office removed from the operating office/entity or, in some manner, an independent review will be made. For associated facilities operated and maintained by a water user entity, examinations will generally be conducted by the area office. However, for certain associated facilities operated and maintained by Reclamation, the Area Manager and Regional Director may jointly agree to allow examinations to be conducted at the area office level, preferably by another area office within the region.
- B. **Duration/Exception.** Examinations will continue on these associated facilities as long as the Federal Government holds title or the facilities remain an integral part of an authorized Reclamation project. However, if all of the following conditions are satisfied, an exception may be made and the examinations can be terminated:
- (1) The construction repayment contract is fully paid out.
  - (2) Applicable contracts with water-user entity do not specifically require that RO&M examinations be performed on a periodic basis.
  - (3) The facilities do not involve any significant public interests (operational liability, public access and safety, water operations for environmental purposes, water deliveries for international water users, water deliveries to multiple water users, etc.) which require Reclamation oversight.
  - (4) There is mutual agreement between the water-user entity and Reclamation to terminate the examinations.
- C. **Frequency.** Examination frequency may vary from 1 to 6 years, as recommended by the responsible Reclamation office, but will not exceed 6 years. Where possible, for efficiency purposes, the frequency may be set to accommodate other required field evaluations/reviews, such as a water conservation plan review (i.e., every 5 years). Factors to be considered in recommending the next examination date (year) include:

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- (1) The overall condition of the facility.
- (2) The use of proper O&M practices and procedures.
- (3) The number and seriousness of new and previous incomplete recommendations.
- (4) The operating entity's/office's effort and sincerity in attempting to complete the recommendations, taking into consideration the resources available.
- (5) The existence of significant public interests relative to the facility's operation.

D. **Guidance.** Applicable portions of the "RO&M Field Examination Guidelines," published by Reclamation in October 1991, will be used as the basis for conducting these examinations. Additional guidance in the operation, maintenance, and management of water-related facilities and systems can be obtained by attending Reclamation's annual Water Management Workshop and from the American Society of Civil Engineers (ASCE) Manual on the Management, Operation, and Maintenance of Irrigation and Drainage Systems (Manual No. 57, 1991), which was a joint effort between ASCE and Reclamation.

### 5. Examination Reports.

A. **Content.** Content will encompass applicable issues listed previously under Section 3, Examination Purposes and Content. Some of the listed issues (e.g., hazardous materials management, pest management, etc.) need only be reported to the extent that they were reviewed/addressed during the examination. A qualifying statement should be included within the examination report to indicate that the examination was not intended to be a full and comprehensive evaluation/assessment of these issues. As a minimum, the examination report will include:

- (1) The author(s) and associated office(s).
- (2) The date(s) of the examination.
- (3) The names and offices of all participants in the examination.
- (4) Operational and weather data at the time of the examination which may have an impact on field observations.
- (5) Status of previous recommendations (those made during last examination and any others remaining incomplete at that time).

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- (6) Listing of new recommendations made as a result of the examination.
  - (7) Definitions of the recommendation categories.
  - (8) Brief description of facilities examined.
  - (9) Narrative/text to describe conditions and deficiencies observed during the examination which support the recommendations made.
  - (10) Documentation of recommendations that have been completed since the last examination.
  - (11) Conclusion statement or paragraph summarizing observations made on the condition of the facilities.
  - (12) Representative photographs of the facility which document pertinent conditions and deficiencies for future reference.
- B. **Format.** Report format will be flexible to accommodate each region's/area office's needs and the content of the examination. However, a simplified standard format should be developed and used by each office.
- C. **Peer Review.** A peer review will be made of the examination report content by appropriate personnel.
- D. **Distribution.** Assuming most examination reports will be distributed by the responsible area office, minimum distribution will consist of 1 copy to the Director, Program Analysis Office, Attention: W-5000; 1 copy to the Director, Technical Service Center, Attention: D-8470; and 1 or more copies to the responsible Regional Director and other involved parties in the examination, such as the responsible operating entity (as applicable). Chief, Dam Safety Office, D-6600, will receive a copy of examination reports on low-hazard dams.
6. **Recommendation Categorizing and Tracking.**
- A. **Categorizing.** Current recommendation categories will be used as presently defined:
- (1) **Category 1.** Recommendations involving the correction of severe deficiencies where immediate and responsive action is required to ensure structural safety and operational integrity of a facility.

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- (a) Based on the severity of the deficiency and the condition of the structure/facility at the time of the examination, the examination team will mutually prescribe an appropriate timeframe for completion of the recommendation. Suggested remedial measures will be discussed at the time of the examination and included in the examination report. Within 30 days following finalization or receipt (depending on office conducting the examination) of the examination report containing a category 1 recommendation, the responsible regional director will notify all concerned offices (i.e., Director, Program Analysis, to the attention of D-5500 and Director, Operations, to the attention of W-6000) of the operating office or entity's plans for accomplishing the work and a scheduled completion date.
- (2) **Category 2.** Recommendations covering a wide range of important matters where action is needed to prevent or reduce further damage or preclude possible operational failure of the facility.
  - (a) Such recommendations are intended to be acted upon as soon as practicable following receipt of the corresponding examination report by the operating office or entity. It is desirable that those recommendations that can be included, scheduled, and accomplished as part of the normal O&M Program be undertaken as soon as weather or water conditions allow to permit quality remedial actions. Some recommendations may require a longer time to accomplish because of the need to budget funds, complete designs, or secure equipment, materials, or personnel. In such cases, the related planning and budgeting should be initiated in a timely manner.
  - (b) Any past category 2 recommendation remaining incomplete at the time of the examination will be addressed during that examination and within the corresponding examination report.
- (3) **Category 3.** Recommendations covering less important matters but believed to be sound and beneficial suggestions to improve or enhance the O&M of the project or facility. The status of each category 3 recommendation will be provided in the subsequent examination report. If the recommendation is still applicable, the current year designation will be reassigned to the recommendation number.

**B. Tracking.** Relative to the tracking of recommendations resulting from the RO&M examinations of associated facilities:

- (1) **Category 1.** Status reports will be provided by the responsible Area Manager to his/her Regional Director and to the Director, Program Analysis, to the attention



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of D-5500 every 6 months (January 1 and July 1) until the recommendation is complete.

- (2) **Category 2.** Status reports will be provided by the responsible Area Manager to his/her Regional Director on an annual basis.
  - (3) **Category 3.** Status reports on an annual basis are not required for these recommendations. Tracking of category 3 recommendations is at the option of each responsible area office.
- C. **Database.** A relational database will be used to maintain the information related to the required tracking/status reports on categories 1 and 2 recommendations. Each area office within each region will provide the required updates to maintain a current "database" of recommendations and their status.
- D. **Annual Summary Report.** An annual summary report, providing an indication of the effectiveness in accomplishing categories 1 and 2 recommendations related to these associated facilities, will be at the option of each region, unless specifically requested by the Commissioner's Office.